

Amendments to Claims

Claims 1-19 canceled.

20. (New) A process for producing purified titanium tetrachloride comprising the following steps:

- a) producing a crude titanium tetrachloride comprising vanadium and aluminum chloride from a carbochlorination of a titanium-containing material;
- b) mixing the crude titanium tetrachloride with an oil that acts as a vanadium passivating agent to create a product;
- c) mixing the product with the crude titanium tetrachloride produced in step a, wherein the product results in the passivation of the aluminum chloride of the crude titanium tetrachloride;
- d) forming an easy-to-separate vanadium compound and an easy-to-separate aluminum-containing compound; and
- e) separating the easy-to-separate vanadium compound and the easy-to-separate aluminum-containing compound to form a purified titanium tetrachloride.

21. (New) The process of claim 20 further comprising the step of:

- a) detecting the amount of a titanium oxychloride in the product and adding an amount of aluminum passivating agent based on comparison of the titanium oxychloride concentration measured in-process with an aim point.

22. (New) The process of Claim 20 wherein the separating is selected from the group consisting of flashing distillation, multi-stage distillation, a solid-liquid separation process, filtration, and centrifugation.

23. (New) The process of Claim 20 wherein the vanadium passivating agent is in an amount sufficient to reduce the concentration of, but not eliminate, the vanadium chlorides.

24. (New) The process of Claim 20 wherein the oil is selected from the group comprising an animal fat, a vegetable oil or a combination thereof

25. (New) The process of Claim 20 wherein the oil is a hydrogenated naphthenic oil.